

17. (New) The process of claim 16, wherein the dehydration step involves placing the primary explant in an air current of a laminar flow cabinet, in a stream of compressed air, or in an airtight container together with silica gel or various over-saturated salt solutions to control the relative humidity.

18. (New) The process of claim 14, further comprising the step of pre-freezing the primary explant prior to cryofreezing.

19. (New) The process of claim 18, wherein the pre-freezing temperature is between -20°C and -40°C.

20. (New) The process of claim 14, wherein the plant tissue utilized is derived from a cocoa, coffee, or carrot plant.

21. (New) The process of claim 20, wherein the plant tissue utilized is derived from *Coffea canephora* or *Coffea arabica*.

22. (New) The process of claim 20, wherein the plant tissue utilized is derived from *Theobroma cacao*.

23. (New) The process of claim 20, wherein the plant tissue utilized is derived from *Daucus carota*.

24. (New) A process for the cryo-preservation of a primary explant comprising the steps of:

Incubating a planting tissue in a regeneration medium for a time sufficient to induce a primary explant, but not a somatic embryo;

dehydrating the primary explant to a water content of at least 28 g/100g dwt;

*prefreezing the primary explant to a temperature between -20°C and -40°C; and
cryofreezing the primary explant.*

25. (New) The process of claim 24, further comprising a two step incubation of the primary explant, wherein the primary explant is first incubated in a medium containing 0.4 M sucrose followed by incubating the primary explant in a medium containing 1 M sucrose.

26. (New) The process of claim 24, wherein the dehydration step involves placing the primary explant in an air current of a laminar flow cabinet, in a stream of compressed air, or in an airtight container together with silica gel or various over-saturated salt solutions to control the relative humidity.

not planting tissue (24)

27. (New) The process of claim 24, wherein the plant tissue utilized is derived from a cocoa, coffee, or carrot plant.

28. (New) The process of claim 24, wherein the plant tissue utilized is derived from *Coffea canephora or Coffea arabica*.

29. (New) The process of claim 24, wherein the plant tissue utilized is derived from *Theobroma cacao*.

30. (New) The process of claim 24, wherein the plant tissue utilized is derived from *Daucus carota*.

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31. (New) A process for the cryo-preservation of a primary explant comprising the steps of:

incubating a planting tissue in a regeneration medium for a time sufficient to induce a primary explant, but not a somatic embryo; and
cryofreezing the primary explant.

32. (New) The process of claim 31, further comprising the step of dehydrating the primary explant to a water content of at least 28 g/100g dwt.

33. (New) The process of claim 31, further comprising the step of prefreezing the primary explant to a temperature between -20°C and -40°C.